

Title (en)
GAS SENSOR AND MANUFACTURING METHOD OF THE SAME

Title (de)
GASSENSOR UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
DÉTECTEUR DE GAZ ET SON PROCÉDÉ DE FABRICATION

Publication
EP 3460461 A1 20190327 (EN)

Application
EP 18159186 A 20180228

Priority
JP 2017180740 A 20170920

Abstract (en)
According to one arrangement, a gas sensor is disclosed. The gas sensor includes a substrate region (1, 2, 3). A first electrode (5a) is provided on the substrate region. A movable structure (30) is provided above the first electrode. The movable structure includes a deformable member (13) configured to deform by absorbing or adsorbing a predetermined gas, a heating (11) member configured to heat the deformable member, and a second electrode (19). A first cavity region (21) is provided between the first electrode and the second electrode.

IPC 8 full level
G01N 27/22 (2006.01); **G01N 33/00** (2006.01)

CPC (source: CN EP US)
G01N 25/20 (2013.01 - US); **G01N 27/221** (2013.01 - US); **G01N 27/226** (2013.01 - CN); **G01N 27/227** (2013.01 - CN EP US); **G01N 33/0022** (2013.01 - EP US); **G01N 33/005** (2013.01 - EP US); **G01N 2027/222** (2013.01 - EP US)

Citation (search report)

- [Y] EP 2169400 A1 20100331 - IEE SARL [LU]
- [Y] US 2016103082 A1 20160414 - KIMURA MITSUTERU [JP]
- [Y] US 2017057811 A1 20170302 - SHIMOOKA YOSHIKI [JP]
- [XP] US 2017343522 A1 20171130 - IKEHASHI TAMIO [JP], et al
- [XY] BASELT D R ET AL: "Design and performance of a microcantilever-based hydrogen sensor", SENSORS AND ACTUATORS B: CHEMICAL: INTERNATIONAL JOURNAL DEVOTED TO RESEARCH AND DEVELOPMENT OF PHYSICAL AND CHEMICAL TRANSDUCERS, ELSEVIER BV, NL, vol. 88, no. 2, 15 January 2003 (2003-01-15), pages 120 - 131, XP004399080, ISSN: 0925-4005, DOI: 10.1016/S0925-4005(02)00315-5
- [Y] YAMAZAKI HIROAKI ET AL: "A high sensitivity MEMS capacitive hydrogen sensor with inverted T-shaped electrode and ring-shaped palladium", 2017 19TH INTERNATIONAL CONFERENCE ON SOLID-STATE SENSORS, ACTUATORS AND MICROSYSTEMS (TRANSDUCERS), IEEE, 18 June 2017 (2017-06-18), pages 226 - 229, XP033130695, DOI: 10.1109/TRANSDUCERS.2017.7994029

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3460461 A1 20190327; CN 109521065 A 20190326; JP 2019056607 A 20190411; JP 6896576 B2 20210630; US 10598647 B2 20200324; US 2019086377 A1 20190321

DOCDB simple family (application)
EP 18159186 A 20180228; CN 201810211511 A 20180315; JP 2017180740 A 20170920; US 201815914828 A 20180307